

Remarks/Arguments:

STATUS OF CLAIMS

The claims are not amended by the present response; claims 1-28, 40-70, and 98-99 are currently pending in the application.

REMARKS/ARGUMENTS

In the Office Action dated July 14, 2006, the Examiner:

rejected claims 1, 2, 5-8, 10-13, 16-28, 40-45, 47-52, 54-57, and 63-66 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,495,533 (hereinafter referred to as "Linehan");

rejected claims 14, 15, 23, 46, and 48 under 35 U.S.C. §103(a) as being unpatentable over Linehan in view of U.S. Patent No. 5,604,801 ("Dolan");

rejected claims 3, 4, 9, 53, 54, 58, 59, and 67-69 under 35 U.S.C. §103(a) as being unpatentable over Linehan in view of U.S. Patent No. 5,764,772 ("Kaufman"); and

rejected claims 60-62 under 35 U.S.C. §103(a) as being unpatentable over Linehan in view of Kaufman and further in view of U.S. Patent No. 6,199,113 ("Alegre").

1. The Examiner's Burden.

It is clear from the literal language of the patent laws, that an applicant is entitled to a patent unless the application or invention fails to satisfy the formal and substantive requirements for patentability. It is also clear that the initial burden is not on the applicant to prove patentability, but rather "the Examiner bears the burden of establishing a *prima facie* case of [unpatentability] based upon the prior art." *In re Fritch*, 23 USPQ2d 1780,1783 (Fed. Cir. 1992).

Meeting this initial burden requires that the examiner provide a reasonable basis for rejecting the application:

The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not...resort to speculation, unfounded assumptions, or hindsight reconstruction to supply deficiencies in its factual basis. *In re Warner*, 154 USPQ 173,178 (CCPA 1967).

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard... 37 CFR §1.56(b)(2)(ii) (emphasis added).

The *prima facie* case...means not only that that evidence of the prior art reasonably allows the examiner's conclusion of unpatentability, but also that the prior art compels such a conclusion as a matter of law... *In re Dillon*, 16 USPQ2d 1897,1908 (Fed. Cir. 1990) (*en banc*), cert denied (emphasis added).

Only if the examiner meets this initial burden, is the burden shifted to the applicant to prove patentability:

The initial determination by the patent examiner is critical to further proceedings, for the presence or absence of the *prima facie* case...controls the need for the applicant to adduce rebuttal evidence... *In re Dillon*, 1908.

If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of [patentability]. MPEP §2142.

2. Claims 98 and 99.

Independent claim 98 and dependent claim 99 are wholly unaddressed in the present Office Action: they are mentioned neither in the Office Action Summary nor in the Examiner's discussion of the rejected claims. As such, the Office Action is incomplete.

However, claims 98 and 99 were addressed in the previous Office Action, and to the extent that the Examiner maintains his rejections of those claims, the Applicant reiterates its previous response to those rejections.

3. Applicant's Response to Certain of the Examiner's Rejections

As argued in the Applicant's previous response, the Examiner's rejections of claims 6, 8, 10, 11, 18, 27, 42, 43, 44, and 66 are still wholly unsupported by the cited prior art and wholly

unexplained in the Office Action. As such, the Examiner has failed to establish the requisite *prima facie* case of non-patentability, and, as discussed above, the Applicant is under no obligation to submit evidence of patentability.

37 CFR §1.104(c)(2) states:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When the reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

In that regard, MPEP §706 further states that “[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity”.

In the present application, the Examiner has rejected the aforementioned claims apparently without any consideration for the particular limitations present in those claims, or, at least, no indication of any such consideration is present in the Office Action. More specifically, the Examiner has grouped the aforementioned claims with other claims and then rejected the group based upon an assertion that is relevant only to the other claims. Thus, the Applicant again respectfully requests that the Examiner either provide specific grounds for rejecting each limitation of claims 6, 8, 10, 11, 18, 27, 42, 43, 44, and 66 or allow those claims for which no such specific grounds exist. As discussed above, it is the Examiner’s initial burden to show that the claims are unpatentable (which is not met by mere unsupported and conclusory rejections), and, absent such a showing, the Applicant has no burden to show that the claims are patentable.

To be clear: The Applicant is not arguing that the Examiner’s rejections are unconvincingly supported, or that the Examiner cannot reject claims as a group, but rather the Applicant is asserting that the Examiner has provided no support or explanation whatsoever for the rejections of the aforementioned claims, and that the Examiner cannot reject claims as group when the asserted support for the rejection of the group is not relevant to, or does not address, all of the claims included in the group.

4. Applicant's Response to Examiner's Rejections under 35 U.S.C. §102(b)

A. State of the Law with Respect to 35 U.S.C. §102(b).

35 U.S.C. §102(b) states, in relevant part, that "[a] person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States." For rejections based on anticipation, there is no question of obviousness or modification of the reference, rather a single reference must teach each, every, and all aspects of the claimed invention either explicitly or impliedly, and any feature not directly taught must be inherently present. MPEP §§706.02 and 2131 citing *Verdegaal Bros. v. Union Oil Co. Of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as in contained in the...claim." MPEP §§706.02 and 2131 citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, a prior art device can perform all of the functions of a claimed apparatus and yet not anticipate the claimed apparatus if the claimed apparatus and the prior art device are structurally distinguishable. MPEP §2114 citing *In re Robertson*, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999). Thus, a rejection under 35 U.S.C. §102(b) is overcome by amending the claims to patentably distinguish over the prior art and/or persuasively arguing that the claims are patentably distinguishable from the cited prior art reference. MPEP §706.02(b).

B. Linehan does not disclose each, every, and all aspects of the claimed invention.

Linehan does not disclose each, every, and all aspects of the claimed invention, and therefore does not anticipate claims 1-2, 5-8, 10-13, 16-28, 40-45, 47-52, 54-57, 63-66 under 35 USC §102(b).

With regard to claims 1, 6-8, 10, 17-21, 26-28, and 40-44 the Examiner has specifically cited col. 4, lines 1-26, and col. 7, lines 30-67, for support for his rejections. Lines 1-18 of col. 4 concern reference citations which do not, on their face, appear relevant to the rejections. Lines 19-26 concern several objects, or purposes, of Linehan's invention, specifically: (1) "to provide an improved computing system", and (2) "to provide an improved computing system having improved

security”. Line 26 falls within the statement of a third object: (3) “to provide an improved computing system having improved security in a distributed computing environment”. Clearly, these are exceedingly general statements having very little relevance to the patentability of any of the claims of the present application, and therefore provide no support for the rejections.

Lines 30-67 of col. 7 concern Linehan’s basic method:

[E]ach data file is encrypted by the Personal Key Client, on the user’s computer, using a randomly-chosen key generated by the Personal Key Server at the time the file is created. The key is stored in the Personal Key Database located on the Personal Key Server...

The Personal Key Server Database contains an entry for each file that is encrypted. these files are indexed by information that identifies the files... Each entry contains the key used to encrypt the corresponding file...

When a file is created...the Personal Key Server randomly generates a file encryption key, creates a new entry in the database, and responds to the Personal Key Client with the file encryption key. The Personal Key Client then uses the key to encrypt the data as it is written to the file.

When a file is accessed...the [Personal Key Server] retrieves the appropriate entry in the database and checks the identity of the accessor...against the file owner’s name and the access control list in the database entry. If the accessor is either the owner or one of the users named in the access control list, the Server sends the file encryption key back to the Personal Key Client. The latter uses the key to decrypt the data as it is read from the file.

Though the Examiner has pointed generally to the foregoing as support for his rejections, he has failed to identify a specific structure or step that corresponds to each and every claim limitation. In fact, the disclosure contradicts the Examiner’s assertions. In Linehan, the file is encrypted and stored on the user’s computer while the encryption key is generated and stored on the Personal Key Server. More specifically, the Personal Key Server Database contains an encrypted entry for each encrypted file, and the entry contains the key used to encrypt the encrypted file. On the Personal Key Database, the entry is indexed by information that identifies the file – not the key. And so, when it is desired to access the encrypted file stored on the user’s computer, the Personal Key Client queries the Personal Key Server with information identifying

the file, the Personal Key Server retrieves the key based upon the information and provides it to the Personal Key Client, and the Personal Key client decrypts the file.

This distinction is important: Linehan uses some aspect or property of the encrypted data file, such as the names, creation dates, or hash values, as a pointer to the encryption key. This is problematic because these aspects or properties are either subject to change or are insufficient by themselves to provide distinct identification. By contrast, the present invention uses a randomly-generated encryption key identification which both does not change and is sufficient to provide distinct identification.

If the Examiner persists in asserting that Linehan discloses the claimed encryption key identification, the Applicant respectfully requests that the Examiner specifically identify the structure or step which he believes corresponds thereto so that the Applicant can, in turn, specifically refute the correspondence.

Thus, Linehan does not disclose a data structure comprising an encrypted data entity having a searchable attribute and an encryption key identification corresponding to the encryption key, as required by the rejected claims.

Furthermore, as discussed above in section 2, with regard specifically to claims 6 and 8, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitations involving dynamic encryption. With regard specifically to claim 10, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitation involving an integrity attribute. With regard specifically to claim 18, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitation involving a second data entity including as attributes the encryption key and the encryption key identification. With regard specifically to claim 27, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitation involving the first data entity containing medical patient name information, and the second data entity containing medical patient address information. With regard specifically to claims 42 and 43, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitations involving the request for the data manipulation comprising, respectively,

a data update or an addition of new information, and further comprising encrypting the new information with a second encryption key. With regard specifically to claim 44, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitations involving the request for the data manipulation comprising a request to view current information, and further comprising encrypting the viewed information with a second encryption key. The Examiner has clearly failed to provide any discussion or support whatsoever for his rejections of these claims and appears to not have considered them at all.

With regard to claims 2, 5, 11, 13, 16, 22, 24-25, 45, 47, 49-50, and 66, Linehan discloses only a control key which is used to encrypt the encryption key (see col. 9, lines 10-18), and does not disclose either the claimed encryption key identification or the claimed system key for encrypting the encryption key identification.

Furthermore, with regard specifically to claim 11, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitation involving the data structure further comprising a system key attribute of the data entity, the security key attribute including the at least one encryption key identification and system key common name. With regard specifically to claim 66, the Examiner has failed to identify in Linehan, or even to assert that Linehan discloses, the limitation involving encrypting the encryption key identification with a system key having a system key common name, and maintaining the system key within a security domain at all times. The Examiner has clearly failed to provide any discussion or support whatsoever for his rejections of these claims and appears to not have considered them at all.

The Examiner has also rejected claims 12, 51-52, 55-57, 63-65, and 70 relying on the assertion that Linehan discloses an encryption key identification. As discussed, however, it does not.

Thus, Linehan does not disclose each, every, and all aspects of the claimed invention, nor are the undisclosed aspects inherently present. For at least the reasons discussed above, Linehan does not anticipate claims 1-2, 5-8, 10-13, 16-28, 40-45, 47-52, 54-57, 63-66, and therefore, the Examiner's rejections of those claims are improper and have been overcome.

5. Applicant's Response to Examiner's Rejections under 35 U.S.C. §103(a)

A. State of the Law with Respect to 35 U.S.C. §103(a).

35 U.S.C. §103(a) states, in relevant part, that "a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

The Examiner must satisfy three criteria in order to establish the requisite *prima facie* case of obviousness under 35 U.S.C. §103: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or combination of references) must teach or suggest all the claim limitations. MPEP §2143 (citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991)). Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990). Additionally, "if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP §2143.01 (citing *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984)). Additionally, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP 2143.02(VI) (citing *In re Ratti*, 123 USPQ 349 (CCPA 1959) (holding that obviousness is not supported where the 'suggested combination of references would require substantial reconstruction and redesign of the elements shown in the [primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.')).

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 5 USPQ 2d 1596 (Fed. Cir. 1988). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure. *In re Vaeck*, 1442. Thus, "[m]easuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." *W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983).

Arguments based only on "common sense" and mere conclusory statements of generalized advantages and convenient assumptions are inadequate to establish a motivation to combine. *In re Lee*, 61 USPQ2d 1430,1434-1435 (Fed. Cir. 2002), and *In re Beasley*, Civ. App. 04-1225, slip op. at 6-7 2004 WL 2793170 (Fed Cir. Dec. 7. 2004) (unpublished). In *Lee*, for example, the court held that the examiner's unsupported assertion that "another motivation would be that the [claimed feature] is user friendly and it functions as a tutorial" was based only on subjective belief and unknown authority and therefore did not adequately address motivation to combine. *In re Lee*, 1434. Similarly, in *Beasley*, the court rejected as inadequate the examiner's unsupported assertions that certain resulting advantages would motivate one with ordinary skill in the art to combine prior art references to arrive at the claimed invention, and stated:

Given the subtle but powerful attraction of a hindsight-based obviousness analysis, we require a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references...The record reflects that the examiner and the Board have managed to find motivation for substituting one type of memory for another without providing a citation of any relevant, identifiable source of information justifying such substitution. The statements made by the examiner upon which the Board relied, amount to no more than conclusory statements of generalized advantages and convenient assumptions about skilled artisans. *In re Beasley*, slip op. at 10.

B. The Examiner has failed to establish the requisite *prima facie* case of obviousness.

The combination of Linehan and Kaufman does not disclose each, every, and all aspects of the claimed invention, and does not suggest to or motivate one with ordinary skill to modify the references to arrive at the claimed invention, and therefore does not render obvious claims 3-4, 53-54, 58-59, and 67-69 under 35 U.S.C. §103(a).

With regard specifically to claim 9, the Examiner has failed to identify in the references, or even to assert that the references disclose or suggest, the limitation involving the data structure comprising a plurality of hash values with each of the searchable attributes having a corresponding hash value.

The Examiner has also rejected claims 54, 58-59, and 67-69, relying on the assertion that Linehan discloses an encryption key identification. As discussed, however, it does not.

Similarly, the combination of Linehan, Kaufman, and Alegre does not disclose each, every, and all aspects of the claimed invention, and does not suggest to or motivate one with ordinary skill to modify the references as asserted, and therefore does not render obvious claims 60-62 under 35 U.S.C. §103(a).

With regard specifically to claim 60, the Examiner has failed to identify in the references, or even to assert that the references disclose or suggest, the limitation involving transmitting the data entity over a data transmission line, and wherein encrypting the data entity comprises encrypting only a portion of the data entity in accordance with a business rule.

Similarly, the combination of Linehan and Dolan does not disclose each, every, and all aspects of the claimed invention, and does not suggest to or motivate one with ordinary skill to modify the references to arrive at the claimed invention, and therefore does not render obvious claims 14, 15, 23, 46, and 48 under 35 U.S.C. §103(a).

More specifically, Dolan discloses a portable security device, such as a smart card, which stores a "key encryption key" for encrypting a remotely stored "private encryption key". Col. 3, lines 24-27. In contrast, the rejected claims require a portable security device which stores a

"system key" for encrypting a remotely stored "encryption key ID" which, in turn, allows for identifying a remotely stored "private encryption key". A major disadvantage of the teaching of Dolan is that the private encryption key is lost if the security device is lost, whereas in the claimed invention the private encryption is not lost if the security device is lost. Instead, only one mechanism for identifying the private encryption key is lost; other mechanisms may be provided for. Thus, contrary to the Examiner's assertion, Dolan does not teach or suggest this feature of the claimed invention, and therefore the combination of Linehan and Dolan does not teach or suggest the claimed invention.

Thus, the combinations of references fail to teach or suggest all of the limitations of the claims. As the Examiner has failed to establish the requisite *prima facie* case of obviousness, the Applicant respectfully asserts that Examiner's rejections of claims 3-4, 9, 14, 15, 23, 46, 48, 53-54, 58-59, 60-62, and 67-69, under 35 U.S.C. §103(a) are improper and have been overcome.

Appln. No. 09/693,605
Amendment dated January 9, 2007
Reply to Office Action dated July 14, 2006

CONCLUSION

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

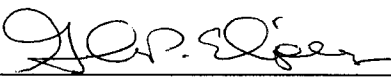
If there are any matters which can be clarified by telephone, the Examiner is requested to contact the undersigned attorney.

If there are any fees due in connection with the filing of this response, the Office is authorized to charge same to Deposit Account No. 50-0354.

Dated: January 9, 2007

Respectfully Submitted,

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